



March 31, 2016

Dv'laa Haa.

Ladies and Gentleman of the Northern Arapaho Tribal Business Council,

Union Wireless and EnerTribe would like to express our appreciation for the collaborative brainstorming that occurred at the NATI/WRI/Union Wireless Communications Workshop in February 2016. While we work toward establishing a partnership with NATI and WRI, we would like to help facilitate solutions to the communications needs identified for both tribal members and tribal government discussed in that workshop. We currently have three projects identified that we would like additional Tribal Business Council review at this time:

I. Arapaho Water Tank – Collocation on Existing Structure

a. Summary of Project Status

- i. Proposed site build –The goal of the project is to provide excellent in-building wireless voice and data services in the Arapaho schools and surrounding areas. We are proposing to place 7 antennas (6 panels and 1 microwave) with radio gear wall mounted on the hand railing of the water tank. Cabling from the antennas would travel down the northern leg of the water tank to an electronics shelter on the ground. A generator shelter and propane tank are also proposed.
  1. Proposed site plans provided on page 3.
- ii. Leasing – Tribal lease/license needed.
  1. Drafted license agreement provided on page 5.

***b. Union Wireless is requesting Northern Arapaho Tribal Business Council resolution to proceed.***

II. Fiber Project – Hudson, WY to Arapaho, WY

a. Summary of Project Status

- i. Initial Proposed route identified – The goal of the project is to connect NATI/WRI fiber to Union Wireless fiber in Hudson, WY
  1. Route Summary on page 11.
  2. More detailed topographical maps on pages 12-14.
- ii. Basic terms
  - a. Union Wireless to provide construction labor (estimated \$435,590 value)
  - b. Northern Arapaho Tribe to own the conduit and fiber,
  - c. Union Wireless provided access to 4 strands of dark fiber

- b. Union Wireless is requesting Northern Arapaho Tribal Business Council resolution to proceed and a point of contact representing tribal interests for this project.***

### **III. Winkelman Tower Ownership Transfer**

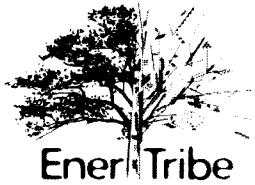
- a. Summary of Project Status***
  - i. Amendment to previous settlement agreement drafted to relinquish ownership of the tower properties to the tribes rather than requiring reclamation of the tower site.***
  - ii. Please see page 15.***
- b. Union Wireless is requesting Northern Arapaho Tribal Business Council resolution to proceed.***

We thank you for your time and please don't hesitate to let us know of any other considerations that might be held by the Northern Arapaho Tribe on these projects.

Sincerely,

***Alyssa R. Blair, Site Development Manager  
Union Telephone Company  
850 N. Highway 414  
Mountain View, WY 82939  
(307) 782-4078  
[ablair@unionwireless.com](mailto:ablair@unionwireless.com)***

## APPENDIX D



### Northern Arapaho Business Council Communications Workshop February 2<sup>nd</sup>, 2015

**NOTE:** Paper copies of maps may be provided in addition to the projector.

**NOTE:** Lunch provided.

9 am – 9:15am Participants arrive and are seated (Snacks and coffee will be available)

9:30am **EnerTribe CEO Forest James will kickoff meeting and moderate introductions:**

- Union Wireless Introductions
- Business Council Introductions & Opening Remarks
- NATI/WRI Introductions
- Departments (THPO, IT etc.)

10:00am **Union Presentation**

- Company Overview
- Existing Infrastructure
- Future Plans (Fiber, Wireless, Towers etc.)
- Discussion

11:00am **Wind River Internet Presentation**

- Company Overview
- Existing Infrastructure
- Future Plans (Fiber, Wireless, Towers etc.)
- Discussion

12:00pm **Lunch Break**

1:00pm **Tribal Historic Preservation Office Presentation**

- Department Overview
- Basic Territory Rundown (percentage of cultural sites)
- Considerations for tower and fiber routes
- Discussion

2:00pm **Open Discussion**

3:00pm **Conclude**

**Main:** 971.319.3372 - **Email:** info@enertribe.com - **URL:** www.enertribe.com

# Northern Apache/WRI Union Telephone

February 2, 2016

David L. Jones Union, Site Acquisition  
Yufna Soldier Wolf - NATHPD - yufnanathpd@gmail.com  
Kevin Klein Smith Union Engineering

Brian Woody Union Chief Customer Relations Officer

Ernest Sauron NATI BOD Chairman

~~BSC~~ NABC

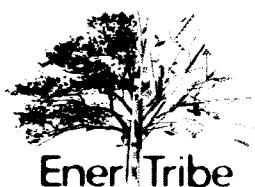
Norman P. Wilson Sr., NABC Council

Ronald K. Gilman NABC

Forest James EnerTribes, Inc



## APPENDIX E



### **Shoshone Business Council Communications Workshop February 4<sup>th</sup>, 2016**

**NOTE:** Paper copies of maps may be provided in addition to the projector.

**NOTE:** Lunch will be provided

- 10 am – 10:15am      Participants arrive and are seated (Snacks and coffee will be available)
- 10:30am      **EnerTribe CEO Forest James will kickoff meeting and moderate introductions:**
- Union Wireless Introductions
  - Business Council Introductions & Opening Remarks
  - Departments (THPO, IT etc.)
- 11:00am      **Union Presentation**
- Company Overview
  - Existing Infrastructure
  - Future Plans (Fiber, Wireless, Towers etc.)
  - Discussion
- 11:30am      **IT Department**
- Network Overview
  - Existing Infrastructure
  - Future Plans (Fiber, Wireless, Towers etc.)
  - Discussion
- 12:00pm      **Lunch Break**
- 1:00pm      **Tribal Historic Preservation Office Presentation**
- Department Overview
  - Basic Territory Rundown (percentage of cultural sites)
  - Considerations for tower and fiber routes
  - Discussion
- 1:30pm      **Open Discussion**
- 2:00pm      **Conclude**

<b>Mobility Fund</b> <b>Phase 1 - §54.1009 Annual Reporting</b> <b>Data Collection Form</b>	FCC Form Approved by OMB OMB 3060-1185 Avg. Burden Estimate per Respondent: 18 Hours
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<b>&lt;010&gt; Study Area Code</b>	518006	<b>Accepted / Filed</b>  <b>JUL - 1 2016</b>  <b>Federal Communications Commission</b> <b>Office of the Secretary</b>
<b>&lt;015&gt; Study Area Name</b>	Union Telephone Company	
<b>&lt;020&gt; Program Year</b>	2016	
<b>&lt;030&gt; Contact Name: Person USAC should contact with questions about this data</b>	Todd Slamowitz	
<b>&lt;035&gt; Contact Telephone Number: Number of the person identified in data line &lt;030&gt;</b>	7035848678 ext.	
<b>&lt;039&gt; Contact Email: Email of the person identified in data line &lt;030&gt;</b>	tslamowitz@fccclaw.com	

<b>&lt;040&gt; Has the information required pursuant to §54.1009 been provided with a Form 481 filing (Y/N)</b>	<b>&lt;040&gt;</b>	<input checked="" type="radio"/> <input type="radio"/>
<b>&lt;041&gt; Attach a description of the documents filed with the Form 481 reporting</b>	<b>&lt;041&gt;</b>	<div style="border: 1px solid black; padding: 2px;">Line 041-Union.pdf</div>
<b>&lt;042&gt; Cite the Study Area Code (SAC) for the Form 481 reporting</b>	<b>&lt;042&gt;</b>	<div style="border: 1px solid black; padding: 2px;">519905</div>

<b>&lt;080&gt; Tribal Lands Reporting (y/n?)</b>		<input type="radio"/> <input checked="" type="radio"/>
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(Does this study area cover tribal lands? Yes or No)

**Notice to Individuals Required by the Paperwork Reduction Act of 1995**

OMB Control Number 3060-1185 (Annual Report for Mobility Fund Phase I Support, FCC Form 690 and Record Retention Requirements)

Notice to Individuals Required by the Paperwork Reduction Act of 1995

Public reporting burden for this collection of information is estimated to average 18 hours per response. Our estimate includes the time to read the instructions, look through existing records, gather and maintain required data, and actually complete and review the form or response. If you have any comments on this estimate, or on how we can improve the collection and reduce the burden it causes you, please write the Federal Communications Commission, Office of Managing Director, AMD-PERM, Washington, DC 20554, Paperwork Reduction Act Project (3060-1185). Please DO NOT SEND COMPLETED FORMS TO THIS ADDRESS. You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number and/or we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-1185.

THIS NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

<010>	Study Area Code	518006
<015>	Study Area Name	Union Telephone Company
<020>	Program Year	2016
<030>	Contact Name - Person USAC should contact regarding this data	Todd Slamowitz
<035>	Contact Telephone Number - Number of person identified in data line <030>	7035848678 ext.
<039>	Contact Email Address - Email Address of person identified in data line <030>	tslamowitz@fccclaw.com

**Reporting Carrier / Mobility Fund Phase 1 Winning Bidder**

<110>	FCC Registration Number	1630201
<111>	Filing Carrier Name	UNION TELEPHONE COMPANY
<112>	Winning Bidder Carrier Name	UNION TELEPHONE COMPANY
<113>	Street Address (or PO Box)	PO BOX 160
<114>	City	MOUNTAIN VIEW
<115>	State	WY
<116>	Zip-Code	82939
<117>	Telephone Number	3077826131 ext.
<118>	Fax Number	3077826913
<119>	Email Address	CRENO@UNIONWIRELESS.COM

**Contact Information**

if same as above, indicate in this box



<120>	Name (First, MI, Last, Suffix)	CHRIS RENO
<121>	Filing Carrier Name	UNION TELEPHONE COMPANY
<122>	Street Address (or PO Box)	PO BOX 160
<123>	City	MOUNTAIN VIEW
<124>	State	WY
<125>	Zip-Code	82939
<126>	Telephone Number	3077826131 ext.
<127>	Fax Number	3077826913
<128>	Email Address	CRENO@UNIONWIRELESS.COM

**Authorized Agent Information**

if no agent, indicate in this box



<130>	Name (First, MI, Last, Suffix)	Todd Slamowitz
<131>	Company	Lukas, Nace, Gutierrez & Sachs, LLP
<132>	Street Address (or PO Box)	8300 Greensboro Drive, Suite 1200
<133>	City	McLean
<134>	State	VA
<135>	Zip-Code	22102
<136>	Telephone Number	7035848678 ext.
<137>	Fax Number	7035848696
<138>	Email Address	tslamowitz@fccclaw.com

518006-Coverage Files.zip, 060 Coverage and Performance Report.zip

<141>

[illegible]

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92



<010> Study Area Code	518006
<015> Study Area Name	Union Telephone Company
<020> Program Year	2016
<030> Contact Name - Person USAC should contact regarding this data	Todd Slamowitz
<035> Contact Telephone Number - Number of person identified in data line <030>	7035848678 ext.
<039> Contact Email Address - Email Address of person identified in data line <030>	tslamowitz@fccclaw.com

## TO BE COMPLETED BY THE REPORTING CARRIER, IF THE REPORTING CARRIER IS FILING CERTIFICATION DATA ON ITS OWN BEHALF:

<b>Certification of Officer or Employee as to Compliance with 47 CFR §54.1009(a)(4)</b>	
I certify that I am an officer or employee of the reporting carrier; my responsibilities include ensuring compliance with 47 CFR §54.1009(a)(4), the information reported on this form and in any attachments is accurate.	
Name of Reporting Carrier:	
Signature of Authorized Officer:	CERTIFIED ONLINE Date 07/01/2016
Printed name of Authorized Officer:	Chris Reno
Title or position of Authorized Officer:	Director of Accounting
Telephone number of Authorized Officer:	3077826131 ext.
Study Area Code of Reporting Carrier:	Filing Due Date for this form:
Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.	

## TO BE COMPLETED BY THE REPORTING CARRIER, IF AN AGENT IS FILING CERTIFICATION DATA ON THE CARRIER'S BEHALF:

<b>Certification of Officer or Employee to authorize an Agent to file Compliance with 47 CFR §54.1009(a)(4) on Behalf of Reporting Carrier</b>	
I certify that (Name of Agent) Lukas, Nace, Gutierrez & Sachs, LLP is authorized to submit the information reported on behalf of the reporting carrier. I also certify that I am an officer or employee of the reporting carrier; my responsibilities include ensuring compliance with 47 CFR §54.1009(a)(4) reported to the authorized agent; and, to the best of my knowledge, the reports and data provided to the authorized agent is accurate.	
Name of Authorized Agent: Lukas, Nace, Gutierrez & Sachs, LLP	
Name of Reporting Carrier: Union Telephone Company	
Signature of Authorized Officer or Employee:	Date:
Printed name of Authorized Officer or Employee:	
Title or position of Authorized Officer or Employee:	
Telephone number of Authorized Officer or Employee:	
Study Area Code of Reporting Carrier: 518006	Filing Due Date for this form: 07/01/2016
Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.	

## TO BE COMPLETED BY THE AUTHORIZED AGENT:

<b>Certification of Agent Authorized to File Compliance with 47 CFR §54.1009(a)(4) on Behalf of Reporting Carrier</b>	
I, as agent for the reporting carrier, certify that I am authorized to submit the certification on behalf of the reporting carrier; I have provided the data reported herein based on data provided by the reporting carrier; and, to the best of my knowledge, the information reported herein is accurate.	
Name of Reporting Carrier: Union Telephone Company	
Name of Authorized Agent Firm: Lukas, Nace, Gutierrez & Sachs, LLP	
Signature of Authorized Agent or Employee of Agent:	Date: 06/29/2016
Name of Authorized Agent Employee: Todd Slamowitz	
Title or position of Authorized Agent or Employee of Agent: FCC Legal Counsel	
Telephone number of Authorized Agent or Employee of Agent: 7035848678 ext.	
Study Area Code of Reporting Carrier: 518006	Filing Due Date for this form: 07/01/2016
Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.	

<010>	Study Area Code	518006
<015>	Study Area Name	Union Telephone Company
<020>	Program Year	2016
<030>	Contact Name - Person USAC should contact regarding this data	Todd Slamowitz
<035>	Contact Telephone Number - Number of person identified in data line <030>	7035848678 ext.
<039>	Contact Email Address - Email Address of person identified in data line <030>	tslamowitz@fcclaw.com

&lt;142&gt; State

&lt;143&gt; County

&lt;144&gt; Tribal Land(s) on which ETC Serves

&lt;145&gt; Tribal Government Engagement Obligation

Name of Attached Document (.pdf)

If your company serves Tribal lands, please select (Yes, No, Not Applicable) for each of these boxes to confirm the status described on the attached PDF, on line 145, demonstrates coordination with the Tribal government pursuant to § 54.1004 includes:

- <146> Needs assessment and deployment planning with a focus on Tribal community anchor institutions;
- <147> Feasibility and sustainability planning;
- <148> Marketing services in a culturally sensitive manner;
- <149> Compliance with Rights of way processes
- <150> Compliance with Land Use permitting requirements
- <151> Compliance with Facilities Siting rules
- <152> Compliance with Environmental Review processes
- <153> Compliance with Cultural Preservation review processes
- <154> Compliance with Tribal Business and Licensing requirements.

Select (Yes, No, Not Applicable)

<010>	Study Area Code	518006
<015>	Study Area Name	Union Telephone Company
<020>	Program Year	2016
<030>	Contact Name - Person USAC should contact regarding this data	Todd Slamowitz
<035>	Contact Telephone Number - Number of person identified in data line <030>	7035848678 ext.
<039>	Contact Email Address - Email Address of person identified in data line <030>	tslamowitz@fcclaw.com

<200> Date Authorized to Receive Support  
<201> Targeted Completion Date  
<202> Total Mobility Fund Support Awarded  
<203> Total Mobility Fund Support Disbursed

07/29/2013

07/15/2015

3943808

1314602.67

&lt;210&gt; Actual Completion Date

07/20/2015

&lt;211&gt; Project Status Description (attached)

518006\_Sweetwater WY-2\_PSD.pdf

(Name of PDF attached)

Please check these boxes below to confirm that the attached PDF, on line 211, contains a project status pursuant to §54.1005(b)(2)(v). The information shall be submitted as appropriate.

<212> Status of Network Deployment - Network Design  
<213> Status of Network Deployment - Construction  
<214> Status of Network Deployment - Deployment  
<215> Status of Network Deployment - Maintenance  
<216> Project Budget Status  
<217> Project Plan Status

✓
✓
✓
✓
✓
✓

&lt;218&gt; Network will Support 3G/4G Mobile Service ?



3G



4G

<010>	Study Area Code	518006
<015>	Study Area Name	Union Telephone Company
<020>	Program Year	2016
<030>	Contact Name - Person USAC should contact regarding this data	Todd Slamowitz
<035>	Contact Telephone Number - Number of person identified in data line <030>	7035848678 ext.
<039>	Contact Email Address - Email Address of person identified in data line <030>	tslamowitz@fcclaw.com

TO BE COMPLETED BY THE REPORTING CARRIER, IF THE REPORTING CARRIER IS FILING ON ITS OWN BEHALF:

## Certification of Officer as to the Accuracy of the Data Reported for Mobility Fund Recipients

I certify that I am an officer of the reporting carrier; my responsibilities include ensuring the accuracy of the reporting requirements for Mobility Fund recipients; and, to the best of my knowledge, the information reported on this form and in any attachments is accurate.

Name of Reporting Carrier:

Signature of Authorized Officer: CERTIFIED ONLINE

Date 07/01/2016

Printed name of Authorized Officer: Chris Reno

Title or position of Authorized Officer: Director of Accounting

Telephone number of Authorized Officer: 3077826131 ext.

Study Area Code of Reporting Carrier:

Filing Due Date for this form:

Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.

<010>	Study Area Code	518006
<015>	Study Area Name	Union Telephone Company
<020>	Program Year	2016
<030>	Contact Name - Person USAC should contact regarding this data	Todd Slamowitz
<035>	Contact Telephone Number - Number of person identified in data line <030>	7035848678 ext.
<039>	Contact Email Address - Email Address of person identified in data line <030>	tslamowitz@fcclaw.com

TO BE COMPLETED BY THE REPORTING CARRIER, IF AN AGENT IS FILING ON THE CARRIER'S BEHALF:

### Certification of Officer to Authorize an Agent to File for Mobility Fund Recipients on Behalf of Reporting Carrier

I certify that (Name of Agent) Lukas, Nace, Gutierrez & Sachs, LLP is authorized to submit the information reported on behalf of the reporting carrier. I also certify that I am an officer of the reporting carrier; my responsibilities include ensuring the accuracy of the data reporting requirements provided to the authorized agent; and, to the best of my knowledge, the reports and data provided to the authorized agent is accurate.

Name of Authorized Agent: Lukas, Nace, Gutierrez & Sachs, LLPName of Reporting Carrier: Union Telephone Company

Signature of Authorized Officer:

Date:

Printed name of Authorized Officer:

Title or position of Authorized Officer:

Telephone number of Authorized Officer:

Study Area Code of Reporting Carrier: 518006Filing Due Date for this form: 07/01/2016

Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.

TO BE COMPLETED BY THE AUTHORIZED AGENT:

### Certification of Agent Authorized to File for Mobility Fund Recipients on Behalf of Reporting Carrier

I, as agent for the reporting carrier, certify that I am authorized to submit the reports for Mobility Fund recipients on behalf of the reporting carrier; I have provided the data reported herein based on data provided by the reporting carrier; and, to the best of my knowledge, the information reported herein is accurate.

Name of Reporting Carrier: Union Telephone CompanyName of Authorized Agent Firm: Lukas, Nace, Gutierrez & Sachs, LLP

Signature of Authorized Agent or Employee of Agent:

Date: 06/29/2016Name of Authorized Agent Employee: Todd SlamowitzTitle or position of Authorized Agent or Employee of Agent: FCC Legal CounselTelephone number of Authorized Agent or Employee of Agent: 7035848678 ext.Study Area Code of Reporting Carrier: 518006Filing Due Date for this form: 07/01/2016

Persons willfully making false statements on this form can be punished by fine or forfeiture under the Communications Act of 1934, 47 U.S.C. §§ 502, 503(b), or fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. § 1001.

## Attachments

<141>

Percentage of  
Total Population  
Reached by  
Service

D

Percentage of Total  
Road Miles covered  
by Service

92

**FCC Form 690**

**Mobility Fund Phase 1 – § 54.1009 Annual Reporting**

**Line 041: Description of documents filed with Form 481**

The documents filed with FCC Form 481 in its Annual Report include:

- Unfulfilled Service Requests (voice), if any.
- Service Quality Standards & Consumer Protection Rules Compliance.
- Functionality in Emergency Situations.
- Tribal Government Engagement Obligation.
- Voice Services Rate Comparability Certification.





Study Area Code: 518006  
Study Area Name: Sweetwater, WY  
Program Year: 2016  
Contact Person: Chris Reno  
Contact Telephone Number: 307-782-6131  
Contact Email: [creno@unionwireless.com](mailto:creno@unionwireless.com)  
Carrier Reference Name: Sweetwater WY-2

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## PROJECT STATUS DESCRIPTION

### SECTION I: DESCRIPTION OF OVERALL PROJECT PLAN

- 3G RNC/MSC/GGSN/SGSN PLUS 4G EPC

In order to launch this system, the necessary 3G and 4G core network needed to be completed and turned operational. This system totals roughly \$3.4 million in network core equipment, which will be shared across all 6 census tracts granted funding to Union Telephone Company in the FCC 901 Mobility Fund.

The core is located in Cheyenne, Wyoming and is fed via dual OC12 networks, giving full redundancy and capacity to support all tower sites related to this project and other network growth on the Union Wireless network. Additional OC12's are already planned as demand increases and also to provide carrier diversity in case of an outage on one particular carriers' network.

STATUS – This portion of the project is complete. Please refer to Section II for more details on the status of the network deployment.

- MIDDLE MILE BACKHAUL

In addition, Union is upgrading its middle mile capabilities in key sections of Wyoming that will allow adequate backhaul facilities to its new 3G and 4G network core.

The first of these upgrades is located in Carbon County, WY between the towns of Hanna and Saratoga. This project connects two new service providers and allow connectivity into several key remote offices within Union Telephone Company's network.

STATUS – This portion of the project is complete. Please refer to Section II for more details on the status of the network deployment.

The second middle mile upgrade was determined to be necessary after 3G/4G deployments in and around the FCC Mobility Fund Phase I deployments starting becoming accessible to consumers. The steep



Study Area Code: 518006  
Study Area Name: Sweetwater, WY  
Program Year: 2016  
Contact Person: Chris Reno  
Contact Telephone Number: 307-782-6131  
Contact Email: [creno@unionwireless.com](mailto:creno@unionwireless.com)  
Carrier Reference Name: Sweetwater WY-2

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uptake in data services required further upgrades from Rawlins north to the towns of Casper and Riverton to maintain the long-term data speed requirements across all six census tracts as required by fund.

STATUS – This portion of the project is complete. Please refer to Section II for more details on the status of the network deployment.

- SWEETWATER WY-2 (T56037971600) 3G HSPA+

This is a census tract that covers a lot of geography with little to no people. The area however includes many oil and gas fields, so while no people live in the area, many people work in the areas on a daily basis. Even with the large geographical areas, much of this is already covered by our 2G network which means we have several key sites that will provide a lot of the coverage with simply an overlay. This build out consists of five overlays and one new build.

TYPE OF BACKHAUL – Given the remote nature of sites in and around Wyoming, Union Wireless is using licensed microwave wherever feasible and unlicensed microwave if no available licenses are capable of being obtained. We are targeting at least 25 Mbps of IP backhaul to each cell tower.

SPECTRUM – In this market, we are using a combination of 850 MHz and 1900 MHz to ensure we stay within current CGSA boundaries. All 850 MHz sites fall within existing CGSA boundaries and do not affect existing Union filings, as the intention is to keep GSM fully operational alongside UMTS. The sole new site falls in a gap of our current CGSA, which we have filed for and intend to build the site on 850 MHz.

KEY RISKS OR CHALLENGES – The new tower location is on BLM land, with the major only challenge being commercial power availability. Union Wireless has already solved the power concern with the acquisition of Cells-On-Wheels (COW's) that operate power from Wind and Solar generation. This platform can generate peak power of almost 8,000 Watts and has 1,500 Amp/Hr of battery backup. Combined with a backup generator, this system has already been deployed in the region successfully for almost 18 months, with little to no use of the backup generator.

After deployment of the Solar and Wind powered COW, Union Telephone Company fully intends to construct a permanent version of the cell location, to ensure that there is operational support for the long term and that the operations exceed minimum guidelines. Ultimately, the site may be powered by similar technologies of Solar and Wind as the COW, as described.



Study Area Code: 518006  
Study Area Name: Sweetwater, WY  
Program Year: 2016  
Contact Person: Chris Reno  
Contact Telephone Number: 307-782-6131  
Contact Email: [creno@unionwireless.com](mailto:creno@unionwireless.com)  
Carrier Reference Name: Sweetwater WY-2

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The other main risk is unknown aspects of terrain in the region and the ability to get coverage into some of the shadowed areas. This was one reason why HSPA+ technology was selected over LTE, given the much more clear understanding on how to operate and optimize this type of network. HSPA+ has also been chosen in order to ensure data speeds meet or exceed the requirements but also that the voice aspects are also solid in the area as well.

STATUS – This portion of the project is complete.

**SECTION II: \$18006 - STATUS OF THE NETWORK DEPLOYMENT PROJECT**

[illegible]

## SECTION II: \$10006 - STATUS OF THE NETWORK DEPLOYMENT PROJECT

[illegible]



Study Area Code: 518006  
Study Area Name: Sweetwater, WY  
Program Year: 2016  
Contact Person: Chris Reno  
Contact Telephone Number: 307-782-6131  
Contact Email: [creno@unionwireless.com](mailto:creno@unionwireless.com)  
Carrier Reference Name: Sweetwater WY-2

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## PROJECT STATUS DESCRIPTION

### SECTION III: PROJECT BUDGET STATUS

#### Overlay Sites

- 5 each
  - New hardware Required
  - New Node B Base Station gear \$60,000 each
  - New Microwave gear for IP Backhaul \$70,000 each
  - Upgrades to tower antenna complex \$20,000 each
  - Labor to related projects \$50,000 each

Each overlay site estimated at \$200,000 cost each, total \$1,000,000 capital contribution

#### New Sites

- 1 each
  - New hardware Required
  - Tower installation
    - Leasing, zoning, permitting costs \$65,000 each
    - Tower site construction \$75,000 each
    - Tower Steel \$45,000 each
    - Lines, antennas, generators \$50,000 each
  - New Node B Base Station gear \$60,000 each
  - New Microwave gear for IP Backhaul \$50,000 each
  - Upgrades to tower antenna complex \$5,000 each
  - Labor to related projects \$50,000 each

Each overlay site estimated at \$400,000 cost each, for a \$400,000 total capital contribution for new sites.

Other related projects include roughly 1 microwave hop to upgrade in order to accommodate this area, which will be roughly \$150,000.

This totals roughly \$1.55 million in capital costs related to the build out.

Union is projecting incremental operating expenses for this site over 5 years to be \$1.95 million.



Study Area Code: 518006

Study Area Name: Sweetwater, WY

Program Year: 2016

Contact Person: Chris Reno

Contact Telephone Number: 307-782-6131

Contact Email: [creno@unionwireless.com](mailto:creno@unionwireless.com)

Carrier Reference Name: Sweetwater WY-2

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BUDGET STATUS –

Core Network and Middle Mile Backhaul Upgrades:	\$1,246,843.42
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Sweetwater WY-2 3G HSPA+:	\$923,333.03
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Total Support Applied to Design/Construction/Deployment:	<b>\$2,170,176.45 – OVER BUDGET</b>
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Total Support Applied to Maintenance:	<b>\$349,200.00 – ON BUDGET</b>
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